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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/460,891	12/14/1999	VICTOR KOREN	1098/OF805	3082

7590 05/08/2003
DARBY & DARBY PC
805 THIRD AVENUE
NEW YORK, NY 10022

EXAMINER

TRAN, CON P

ART UNIT	PAPER NUMBER
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2644

DATE MAILED: 05/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/460,891

Applicant(s)

KOREN, VICTOR

Examiner

Con P. Tran

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 December 1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statements filed on 02/08/02, paper number 4 has been considered and placed in the application file.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claim 1** is rejected under 35 U.S.C. 102(e) as being anticipated by Blon et al. (6,542,604).

Regarding **claim 1**, Blon et al. teaches a method for correcting for an echo signal component in a telecommunications device (Fig. 1), comprising the steps of inherently sampling a transmitted signal (TTIP) across a sampling resistor (R); subtracting the sampled transmitted signal (through subtractor AGC) from a received line signal (RTIP)

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to obtain a reconstructed received signal; inherently sampling the transmitted signal across a first RC network echo compensation circuit (RTL1,CTL1) to obtain a first echo compensation signal; and subtracting the first echo compensation signal from the received line signal (RTIP) to compensate the reconstructed received signal (col. 3, lines 18-67).

4. **Claims 5, 9, and 11** are rejected under 35 U.S.C. 102(e) as being anticipated by Grisamore et al. (6,445,791).

Regarding **claim 5**, Grisamore et al. teaches an apparatus for compensating for echo signal in a telecommunications device comprising:

a transmitter having an output (TX-); a receiver having an input (RX-); a line transformer (208) coupled to the transmitter output and the receiver input; and an echo compensation circuit including a first circuit branch (204b) coupled to the transmitter output (TX-) and the receiver input (RX-) and a second circuit branch (204a) coupled to the transmitter output (TX-) and the receiver input (RX-; see Fig. 2, col. 5, lines 8-45).

Regarding **claim 9**, Grisamore et al. teaches an apparatus for compensating for echo signal in a telecommunications device (see Fig. 2, 3, and respective portions of the specification; col. 5, lines 8-45) comprising: a first differential transmitter (TX-) having an output terminal (202b) coupled to a first transmitted signal node; a second

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differential transmitter (TX+) having an output terminal (202a) coupled to a second transmitted signal node; a first current limiting resistor (75, lower) having a first terminal coupled to the first transmitted signal node and a second terminal coupled to a first line transformer (208) node; a second current limiting resistor (75, upper) having a first terminal coupled to the second transmitted signal node and a second terminal coupled to a second line transformer node; a first sampling resistor (211b) having a first terminal coupled to the first line transformer node and a second terminal connected to a first received signal node (203b); a second sampling resistor (211a) having a first terminal coupled to the second line transformer node and a second terminal connected to a second received signal node (203a); a first compensation circuit (211b) having a first terminal coupled to the first transmitted signal node (202b) and a second terminal coupled to the first received signal node (203b); a second compensation circuit (204b) having a first terminal coupled to the first transmitted signal (202b) node and a second terminal coupled to the second received signal node (203a); a third compensation circuit (211a) having a first terminal coupled to the second transmitted signal node (202a) and a second terminal coupled to the second received signal node (203a); and a fourth compensation circuit (205b) having a first terminal coupled to the second transmitted signal (202a) node and a second terminal coupled to the first received signal node (203b).

Regarding **claim 11**, Grisamore et al. further teaches an apparatus according to

claim 9 wherein, the first terminal of the first sampling resistor (211b) is coupled to the first transmitted signal node (202b); and the first terminal of the second sampling resistor (211a) is coupled to the second transmitted signal node (202a).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 1-8, and 10** are rejected under 35 U.S.C. 103(a) as being unpatentable over Grisamore et al. (6,445,791) in view of Blon et al. (6,542,604).

Regarding **claim 1**, Grisamore et al. teaches a method for correcting for an echo signal component in a telecommunications device (Fig. 2, 3), comprising the steps of inherently sampling a transmitted signal (TX-) across a sampling resistor (211b); subtracting the sampled transmitted signal (through 211b) from a received line signal (RX-) to obtain a reconstructed received signal; inherently sampling the transmitted signal across a first echo compensation circuit (204b) to obtain a first echo compensation signal; and subtracting the first echo compensation signal from the received line signal (RX-) to compensate the reconstructed received signal (col. 5, lines 8-45).

However, Grisamore et al. reference does not explicitly disclose first echo compensation circuit is an RC network. Thus one of ordinary skill would have been motivated to seek a method of RC network echo compensation circuit in order to provide an actual working arrangement taught by Grisamore et al. such as one of Blon et al. in the same field of endeavor.

Blon et al. teaches a device for echo attenuation in a digital transmission, which has a RC network echo compensation circuit (RW1, Fig. 1; col. 3, lines 42-46) for the purpose of provides sufficient echo attenuation (col. 1, lines 57-58).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to include within the Grisamore et al. a method having echo compensation circuit is a RC network as taught by Blon et al. for the purpose of provides sufficient echo attenuation, as suggested by Blon et al in column 1, lines 57-58.

Regarding **claims 2-4**, Grisamore et al. in view of Blon et al. teaches the method of claim 1, further comprising steps of inherently sampling, subtracting in which echo compensating circuit 204b, 204a of Grisamore et al. (see Fig. 2, 3, and respective portions of the specification; col. 5, lines 8-45) are modified by RC network echo compensation circuits RW1, RW2 for line transformer echo compensation, and RTL1, CTL1, RTL2, CTL2, RTL3, CTL3, RTL4 for loop echo compensation of Blon et al. (see Fig. 1 and respective portions of the specification; col. 3, lines 37-67).

Regarding **claims 5-8**, these claims merely reflect the apparatus to the method claim of claims 1-4 and are therefore rejected for the same reasons.

Regarding **claim 10**, Grisamore et al. teaches an apparatus for compensating for echo signal in a telecommunications device as claimed in claim 9. However, Grisamore et al. reference does not explicitly disclose first, second, third, and fourth echo compensation circuits further comprises a first compensation resistor and a first compensation capacitor connected in series.

Grisamore et al. disclose first (211b), second (204b), third (204a), and fourth (211a) echo compensation circuits having resistors value. Thus one of ordinary skill would have been motivated to seek embodiment echo compensation circuit in order to provide an actual working arrangement taught by Grisamore et al. such embodiments would have been any known echo compensation circuits such as one of Blon et al. in the same field of endeavor.

Blon et al. teaches a device for echo attenuation in a digital transmission, which has echo replica YBT (resistor), CBT (capacitor) in series (Fig. 1; col. 3, lines 48-53) for the purpose of provides sufficient echo attenuation (col. 1, lines 57-58).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to include within the Grisamore et al. an echo compensation circuit that comprises capacitor and resistor connected in series, as taught by Blon et al., for the purpose of provides sufficient echo attenuation, as suggested by Blon et al in column 1, lines 57-58.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Inventor	Publication	Number	Disclosure
Dreyer	US Patent	6,327,309	A bidirectional communications interface employs the same path for transmitting and receiving.
Virdee	US Patent	4,581,492	A digital duplex communication system includes an echo canceller of the look-up table type.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Con P. Tran, whose telephone number is (703) 305-2341. The examiner can normally be reached on M - F (8:30 AM - 5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W. Isen can be reached on (703) 305-4386. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.


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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Customer Service Office at telephone number (703) 306-0377.

cpt CPT
May 2, 2003



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